

Source Selection Statement for the NASA Geophysics, Geodynamics, and Space Geodesy  
Acquisition  
RFP NNG10316070R

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On June 10, 2011, I, along with senior officials from Goddard Space Flight Center (GSFC) met with the Integrated Evaluation Team (IET) appointed to evaluate proposals in connection with the Geophysics, Geodynamics, and Space Geodesy (GGSG) Acquisition.

*Procurement Description*

The principal purpose of the GGSG contract is to support a wide array of geodynamic, geomagnetic, geophysical, and atmospheric investigations of solar system bodies such as the Earth, Venus, Mars, and Mercury. Among the requirements for these investigations are instrument development; software development and maintenance; data collection, archiving and dissemination; scientific data analysis, modeling and interpretation; reports and presentations of scientific results; public outreach and education; and associated technical and administrative work.

The GGSG Acquisition Request-for-Proposal (RFP) was released on December 17, 2010.

One (1) amendment was issued to the RFP. Amendment Number one answered questions from industry on the RFP and made corresponding RFP revisions.

The contract will be a Cost Plus Fixed Fee (CPFF) Indefinite Delivery Indefinite Quantity (IDIQ) contract with an effective ordering period of 4 years and one month from the date of contract award.

This procurement was conducted as a full and open competition in accordance with FAR Part 15.3, entitled "Source Selection."

*Proposals Submitted*

On February 2, 2011, NASA received timely proposals from the following two (2) companies:

Stinger Ghaffarian Technologies ("SGT")
ARRAY Information Technology Inc. ("ARRAY")

*Evaluation Procedures and Summary Results*

The IET evaluated proposals in accordance with the procedures prescribed in FAR Part 15, NASA FAR Supplement (NFS) Part 1815, and the RFP evaluation criteria. The RFP listed three evaluation factors: Mission Suitability, Cost, and Past Performance. The RFP specified the relative order of importance of these factors as follows:

size, content, and/or complexity to the requirements of this acquisition. Past Performance information sources included: offeror provided past performance information, offeror's customer provided past performance questionnaires, information from government past performance databases, and interviews with the offeror's customers.

As a result of the evaluation process, the final IET adjectival ratings are summarized below:

Offeror	Understanding the Key Requirements of the Statement of Work (SOW) and Technical Approach to Representative Task Orders (RTOs)	Management Approach	Small Business Utilization	Probable Cost Confidence	Past Performance
SGT	Excellent	Excellent	Very Good	Medium	Very High
ARRAY	Poor	Fair	Excellent	Low	Moderate

### *Detailed Results of the Evaluation*

#### **Mission Suitability Factor:**

#### **SGT**

SGT received eight (8) significant strengths, seven (7) strengths, no weaknesses, no significant weaknesses and no deficiencies.

**Under the Understanding the Key Requirements of the Statement of Work (SOW) and Technical Approach to Representative Task Orders (RTOs) subfactor,** SGT's proposal received an adjectival rating of *Excellent*. SGT received four (4) significant strengths, five (5) strengths, no weaknesses, no significant weaknesses and no deficiencies.

#### **SIGNIFICANT STRENGTH #1: BROAD UNDERSTANDING OF GRAVITY RELATED AREAS COUPLED WITH EFFECTIVE APPROACH FOR MODEL DEVELOPMENT**

The Offeror provides a well thought out, coherent, and thorough response to all technical requirements in these areas and adds valuable comments on issues related to this work that go beyond what is required in the RFP. The Offeror shows excellent understanding of scientific principles and required data types. The Offeror provides detailed proposals to improve gravity solutions and models.

#### **SIGNIFICANT STRENGTH #2: EXCELLENT UNDERSTANDING/TECHNICAL APPROACH TO REFERENCE FRAME & GEOPHYSICAL FLUIDS CONCEPTS AND THEIR RELATIONSHIP TO SEA LEVEL STUDIES**

The Offeror's proposal provides high detailed discussion of scientific topics and demonstrates knowledge and understanding that goes beyond the RFP. The Offeror demonstrates extensive knowledge of space geodesy techniques, data combination strategies and orbital methods, proposals for incorporating multiple data types in global sea level model generation.

### **SIGNIFICANT STRENGTH #3: EXCELLENT UNDERSTANDING AND TECHNICAL APPROACH TO SATELLITE ALTIMETRY**

The Offeror proposes robust software development lifecycle, configuration control, and adherence to NASA Procedural Requirements (NPR). The Offeror proposes enhancements to improve system for reuse by future missions. The Offeror proposes improvements in algorithms to refine Geoscience Laser Altimeter System (GLAS) data products. The Offeror proposes broadening spatial and temporal coverage of altimetry databases. The Offeror proposes detailed input on ice sheet models and combination of Gravity Recovery And Climate Experiment (GRACE) data with altimeter data.

### **SIGNIFICANT STRENGTH #4: EXCELLENT UNDERSTANDING OF GEODYN AND ANALYSIS SOFTWARE**

The offeror demonstrates a thorough understanding of Geodynamics Orbit and Geodetic Parameter Estimation System (GEODYN) system and software configuration control. Offeror provides excellent proposals for incorporation of new models and data types into GEODYN. The Offeror demonstrates an in-depth understanding of Global Positioning System (GPS) data analysis issues. The Offeror demonstrates broad understanding of planetary mission simulation requirements.

### **STRENGTH #1: BROAD UNDERSTANDING OF GEOMAGNETIC INFRASTRUCTURE SUPPORT**

The Offeror proposes simulations for optimizing orbital characteristics for future missions. The Offeror demonstrates a very deep understanding of magnetic model algorithm development. The Offeror demonstrates a firm grasp of magnetometer calibration techniques.

### **STRENGTH #2: GOOD UNDERSTANDING AND TECHNICAL APPROACH TO ICE PENETRATING RADAR AND ICE SHEET DATA ANALYSIS**

The Offeror's proposal provides a strong approach to ensure well calibrated, fully corrected data used for intercomparisons to detect changes in ice sheet characteristics.

### **STRENGTH #3: GOOD UNDERSTANDING AND TECHNICAL APPROACH FOR DIGITAL TOPOGRAPHY/INLAND WATER ALTIMETRY**

The Offeror proposes use of land cover data to evaluate elevation biases as a function of land cover types. The Offeror demonstrates understanding of need to transform regional GPS measurements to global Terrestrial Reference Frame (TRF) to validate digital elevation products in consistent frame. The Offeror proposes evaluation of alternate atmospheric models to improve analysis.

**STRENGTH #4: INSIGHTFUL UNDERSTANDING AND TECHNICAL APPROACH FOR PRECISION ORBIT DETERMINATION (POD) (RTO 1)**

The Offeror demonstrates a thorough, detailed, efficient technical approach and WBS structure to RTO 1. The Offeror proposes a good risk assessment and mitigation plan. The Offeror proposes to advance POD standards through GPS data processing. The Offeror demonstrates a strong expertise in POD software. The proposed staffing is efficient and demonstrates understanding of requirements for RTO 1.

**STRENGTH #5: REALISTIC AND MERITORIOUS STAFFING FOR RTO2**

The Offeror's proposal provided a well documented approach to website development and metadata extraction, storage, and interface. The proposed staffing is efficient and demonstrates understanding of requirements for RTO 2

**Under the Management Approach subfactor,** SGT's proposal received an adjectival rating of *Excellent*. SGT received three (3) significant strengths, two (2) strengths, no weakness, no significant weaknesses and no deficiencies.

**SIGNIFICANT STRENGTH #1: EXCELLENT OVERALL APPROACH AND ORGANIZATIONAL STRUCTURE, POLICIES, PROCEDURES AND TECHNIQUES**

The Offeror's proposal provides efficient workflow management through personnel structure. The Offeror proposes experienced task management leads which also perform technical work. The Offeror proposes a small number of management layers, efficient interrelationships with subcontractors and a portal for management of contract work and reporting.

**SIGNIFICANT STRENGTH #2: ENSURING A QUALIFIED WORKFORCE**

The Offeror proposes detailed plans to respond to critical requirements, staff new requirements, and approach to recruitment, retention, and rewards.

**SIGNIFICANT STRENGTH #3: OUTSTANDING PHASE-IN PLAN**

The Offeror's phase-in plan enhances potential for retaining qualified personnel, minimizes disruption to current work and provides detailed management organization,

schedule, orientation and training. The Phase-in plan proposes to recruit staff from subcontractor currently on contract but not in proposal.

#### **STRENGTH #1: STRONG SUBCONTRACTOR AND TEAMING ARRANGEMENTS**

The Offeror proposal provides the basis for, and benefits of, subcontractor selection. The proposed team features numerous local firms with significant experience on GGSG SOW. The task leads from subcontractors where appropriate shows high degree of local autonomy. The subcontractor task assignments are based on technical strengths.

#### **STRENGTH #2: STRONG SAFETY AND HEALTH PLAN**

The Offeror proposed Safety and Health Plan exceeds NASA and GSFC standards. The Offeror demonstrates in-depth knowledge of Safety Goddard Procedural Requirements (GPRs). The Offeror establishes the responsibility of the program manager for the effective implementation of the program within context of Maryland Occupational Safety and Health Voluntary Protection Program (VPP) Star Program, which is a goal for GSFC.

**Under the Small Business Utilization subfactor**, SGT's proposal received an adjectival rating of *Very Good*. SGT received one (1) significant strength, no strength, no weakness, no significant weaknesses and no deficiencies.

#### **SIGNIFICANT STRENGTH #1: OUTSTANDING SMALL BUSINESS UTILIZATION**

The Offeror's Small Business Plan proposed an entire subcontracting team composed of six small business partners and an identified Historically Black Colleges and Universities (HBCU). The Offeror has proposed an overall small business subcontracting goal of 40% for total small business concerns that is significantly higher than the Government's recommended goal of 20%.

#### **Mission Suitability Factor:**

#### **ARRAY**

ARRAY received one (1) significant strengths, no strengths, eight (8) weaknesses, four (4) significant weaknesses and no deficiencies.

**Under the Understanding the Key Requirements of the Statement of Work (SOW) and Technical Approach to Representative Task Orders (RTOS)**, ARRAY's proposal received an adjectival rating of *Poor*. ARRAY received no significant strengths, no strengths, eight (8) weaknesses, three (3) significant weaknesses and no deficiencies.

**SIGNIFICANT WEAKNESS #1: LACK OF UNDERSTANDING AND APPROACH TO ICE CLOUD AND LAND ELEVATION SATELLITE (ICESAT) SCIENCE STANDARD DATA PRODUCTS**

The Offeror's proposal re-states sections of the SOW and did not address specific Technical Requirements. The Offeror did not adequately address their proposed technical approach. The Offeror does not provide techniques and procedures that will be used to satisfy the requirements (e.g., GLAS data product improvements). The proposal does not adequately demonstrate an understanding of specific software lifecycle or the practices and techniques called for in the SOW section. The proposal does not adequately address support of studies and development related to ICESat-2 and other missions.

**SIGNIFICANT WEAKNESS #2: WEAK TECHNICAL APPROACH TO DEVELOPMENT AND MAINTENANCE OF GEODYN SOFTWARE**

The Offeror's proposal did not provide adequate details in key areas such as upgrade GEODYN's laser altimetry and GPS capabilities, maintenance of GEODYN under configuration control, software benchmarking, and GPS data processing.

**SIGNIFICANT WEAKNESS #3: INADEQUATE RESPONSE TO MULTIPLE ITEMS IN SOW**

The Offeror's proposal omits, restates, or inadequately addresses approximately 27% of the 123 technical requirements within the 21 SOW sections.

**WEAKNESS #1: INADEQUATE UNDERSTANDING OF EARTH GRAVITY FIELD**

The Offeror's proposal demonstrates a lack of understanding of the orbit determination process and gravity model implementation.

**WEAKNESS #2: INADEQUATE UNDERSTANDING OF TERRESTRIAL REFERENCE FRAME AND GEOPHYSICAL FLUIDS INFLUENCE**

The Offeror's proposal provides inadequate input to show understanding of complex reference frame issues. The proposal's emphasis on experience in monitoring reservoir levels does not pertain to their influence on geodynamic properties.

**WEAKNESS #3: WEAK UNDERSTANDING OF AND APPROACH TO GEOMAGNETIC INFRASTRUCTURE**

The Offeror's proposal lacks adequate discussion of key scientific principles, geomagnetic science data processing, modeling, and data interpretation.

**WEAKNESS #4: INADEQUATE TECHNICAL APPROACH FOR ALTIMETRY ORBIT SUPPORT**

The Offeror's proposal provides insufficient details on data types and strategies required for generating required orbit products. The proposed technical approach for orbit determination relies on use of the wrong software packages.

**WEAKNESS #5: LACK OF UNDERSTANDING AND APPROACH TO ALTIMETRY OF INLAND WATER BODIES**

The Offeror's proposal inadequately addresses several technical requirements such as increasing radar altimetry data holdings, maintain/enhance altimetry database, and increasing number of target lakes.

**WEAKNESS #6: WEAK OVERALL RESPONSE TO RTO 1, PRECISION ORBIT DETERMINATION**

The Offeror's proposal demonstrates an inadequate understanding of geodetic data processing and use of GEODYN, and DESDynI pre-launch studies. The Offeror's proposed skill mix of staff is not efficient.

**WEAKNESS #7: WEAKNESS IN PROPOSED STAFFING RTO 1, PRECISION ORBIT DETERMINATION**

The Offeror's proposed staffing was ambiguous and large. The Offeror states they have personnel with GEODYN experience to do most of the work yet propose to rely on incumbent capture.

**WEAKNESS #8: INADEQUATE STAFFING PROPOSED FOR RTO 2, SCIENTIFIC DATA SYSTEM SUPPORT**

The Offeror's staffing plan for RTO 2 does not appear adequate for the work detailed by the Offeror. The Offeror proposed Programmer Analyst III at 1.0 FTE to handle too many tasks and over staffing for the documentation activity.

**Under the Management Approach subfactor**, ARRAY's proposal received an adjectival rating of *Fair*. ARRAY received no significant strengths, one (1) strength, no weakness, one (1) significant weakness and no deficiencies.

**STRENGTH #1: STRONG ORGANIZATIONAL STRUCTURE, POLICIES, PROCEDURES & TECHNIQUES TO MANAGE WORKFLOW**

The Offeror's proposed technical staff with minimal levels of management. The Offeror proposed the development of detailed Program Management Plan/Task Plans to manage and control work schedules.

The Offeror proposed a program management system used to manage tasks and provides access to the contractor and government personnel (Contracting Officer's Technical Representative and Contracting Officer).

**SIGNIFICANT WEAKNESS #1: SIGNIFICANTLY WEAK PHASE-IN PLAN**

The Offeror's proposed phase-in plan relies on incumbent capture which poses significant risk to government. The Offeror's proposal provides an inadequate mitigation of the risk of losing incumbent task leads (identified as key personnel to attract). The Offeror proposes meeting with government personnel late in transition process. The Offeror phase-in plan focuses on transitioning of critical tasks without addressing other tasks and how to determine which tasks are critical.

**Under the Small Business Utilization subfactor**, ARRAY's proposal received an adjectival rating of *Excellent*. ARRAY received one (1) significant strength, no strength, no weakness, no significant weaknesses and no deficiencies.

**SIGNIFICANT STRENGTH #1: EXCEPTIONAL SMALL BUSINESS UTILIZATION**

The Offeror is an SBA-certified 8(a) company and proposes a total of 80% small business utilization (51% from Offeror and 29% including additional Small Business subcontracts) this exceeds government small business goals of 20%.

**Under the Cost Factor**, ARRAY's proposed and probable cost was significantly higher than the proposed and probable cost of SGT. The IET made some probable cost adjustments to both proposals.

### **Past Performance Factor:**

**Under the Past Performance Factor**, SGT received a *Very High* confidence rating and Array received a *Moderate* confidence rating.

**For SGT**, the IET considered a total of four (4) past performance references for the prime. The four contracts that SGT referenced in the Past Performance volume met the size (average annual amount) and relevancy (recent –ongoing or completed less than 3 years prior to issuance of RFP, and relevant in terms of content and/or complexity) requirement in the RFP.

Overall SGT's past performance was considered very highly relevant to this acquisition. Based on the past performance references SGT's overall performance for the prime were very high and high ratings. Therefore, the IET has a very high level of confidence that SGT will perform the required effort successfully.

**For Array**, , the IET considered a total of two (2) past performance references for the prime and significant subcontractor. The two contracts (prime and significant subcontractor) that ARRAY referenced in the Past Performance volume met the size (average annual amount) and relevancy (recent –ongoing or completed less than 3 years prior to issuance of RFP, and relevant in terms of content and/or complexity) requirement in the RFP. Overall ARRAY's past performance was considered moderately relevant to this acquisition. Based on the past performance references ARRAY's overall performance for the prime were very high ratings and the significant subcontractors were very high. Therefore, the IET has a moderate level of confidence that ARRAY will perform the required effort successfully.

### *Source Selection Decision*

I carefully reviewed the Integrated Evaluation Team's documentation entitled "Geophysics, Geodynamics, and Space Geodesy (GGSG) Support Acquisition Presentation to Source Selection Authority", dated June 10, 2011. I determined that the findings presented by the IET, as documented in its Presentation and Backup Report, were detailed, consistent with the evaluation criteria in the RFP, and provided a clear description of the merits of each proposal. Further, I determined that the findings were reasonable and valid for purposes of making a selection decision. I accept the findings from the IET and concur with the Contracting Officer that discussions are not necessary. In determining which proposal offered the best value to NASA, I referred to the relative order of importance of the three evaluation factors as specified in the RFP:

The Cost Factor is significantly less important than the combined importance of the Mission Suitability Factor and the Past Performance Factor. As individual Factors, the Past Performance Factor is less important than the Mission Suitability Factor but is slightly more important than

the Cost Factor. Additionally, the relative order of importance of the Mission Suitability subfactors are as follows: Subfactor B – Management Approach, Subfactor A- Understanding the Key Requirements of the Statement of Work and Technical Approach to Representative Task Orders (RTOs), and Subfactor C – Small Business Utilization.

Finally, I carefully considered the findings in relation to the evaluation criteria in the RFP, and exercised my independent judgment regarding the significance of the findings as discriminators between the proposals in accordance with the evaluation criteria in the RFP.

Comparing the proposals under subfactor A, Understanding the Key Requirements of the Statement of Work and Technical Approach to Representative Task Orders (RTOs), SGT's proposal received an "Excellent" adjectival rating resulting from 4 significant strengths, and 5 strengths. Specifically, I found that SGT's proposal was significantly strong and distinguished itself over the other offeror in the following areas: Excellent understanding and approach to multiple sections in the SOW, Thorough and in-depth understanding of the type of work and analysis required for this effort. Whereas, ARRAY received a "Poor" adjectival rating, resulting from 3 significant weaknesses and 8 weaknesses. Specifically, I noted that ARRAY's weaknesses for inadequately addressing technical requirements in the SOW and lack of understanding of the type of work and analysis to be performed was a selection discriminator. I determined that the ARRAY's proposal's lower adjectival rating of "Poor" and my assessment of the multiple significant weaknesses and weaknesses made them much less competitive for selection.

Comparing the proposals under Subfactor B, Management Approach, I noted a selection discriminator in that SGT was the only offeror to receive a significant strength. SGT's proposal received an "Excellent" adjectival rating resulting from 3 significant strengths and 2 strengths. Specifically, I found that SGT proposed an overall management approach, staffing, and phase-in plan that exceeded RFP requirements. Whereas, ARRAY received a "Fair" adjectival rating, resulting from 1 strength and 1 significant weakness. Specifically, I found that ARRAY's proposed a strong organizational structure, and sound policies, procedures, and techniques to manage workflow. However, the phase-in plan was significantly weak.

Under Subfactor C, the Small Business Utilization, the least important subfactor, I noted that both offerors rated well. Under this one subfactor, ARRAY's proposal received an "Excellent" adjectival rating resulting from 1 significant strength. Whereas, SGT's proposal received a "Very Good" adjectival rating resulting from 1 significant strength.

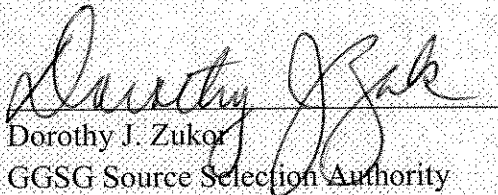
Based on the above, I concluded that SGT's proposal had a clear advantage over the other offerors proposal in the Mission Suitability Factor.

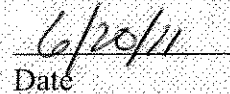
The IET's evaluation of Past performance resulted in SGT receiving a "very high level of confidence" rating and ARRAY receiving a "moderate level of confidence". I concluded that SGT's past performance was highly relevant and that their overall performance ratings were

predominantly high to very high. Overall, SGT's past relevance to the GGSG SOW was more significant than Array, based on the questionnaires that were received.

Regarding the Cost Factor, the least important Factor, I examined the rationale for adjustments made in determining probable cost and concurred with the IET's findings including the level of confidence in the probable cost adjustments, if any. I questioned the IET carefully in order to understand why cost adjustments to the proposed costs were considered necessary and I agreed with the adjustments that were made. I noted that ARRAY proposed the highest cost of the two proposals and had the highest probable cost. As a result of the cost evaluation, adjustments were made to both offerors. The IET assessed a level of confidence of "low" to the probable cost for Array and "medium" to the probable cost of SGT and I agreed with this assessment, although this did not impact my selection decision.

Based on the foregoing and upon consideration of the relative importance of the three evaluation factors, under the RFP, I determined that one offeror, SGT, presented an overall superior proposal that offered the best value to the Government. SGT's significantly higher Mission Suitability Factor rating, was a major selection discriminator in my decision. Notably, under the Mission Suitability Factor, SGT's proposal was the only proposal to receive an "Excellent" rating under Subfactor B, Management Approach, the most important subfactor, and the second most important Subfactor A, Understanding Key Requirements of the SOW and Technical Approach to RTOs. Further, SGT was the highest rated proposal in the past performance factor receiving a "very high level of confidence" rating. Finally, I noted that SGT's proposal offered the lowest probable cost with a "medium" level of cost confidence. Therefore, I select SGT for award of the Geophysics, Geodynamics, and Space Geodesy (GGSG) contract.

  
Dorothy J. Zukor  
GGSG Source Selection Authority

  
Date